

NOx SIP Call Applicability: Carbon Monoxide (CO) boilers combusting CO from the Fluid Catalytic Cracking Units (FCCUs)

BACKGROUND

General

- Some FCCUs use CO boilers (FCCU-CO boilers) to combust and thereby control CO and to produce steam for use at the refinery.
- NOx is produced by the regenerator at the FCCU and by the CO boiler and vents through a single stack.

NOx SIP Call treatment of FCCU-CO boilers

- The NOx SIP Call includes “industrial boilers” as large non-electric generating units (non-EGUs), but excludes FCCUs, from calculation of required highly cost-effective reductions (63 FR 57356, 57416, Oct. 27, 1998).
- In the NOx SIP Call preamble and rule, “FCCU” is not defined, but the definition of “boiler” (40 CFR 96.2) covers FCCU-CO boilers.
- Technical support documents developed for NOx SIP Call final rule (but not developed for NOx SIP Call proposed rules) describe “FCCU” as including the process heater and the regenerator and treat the FCCU-CO boiler as a separate source.
- The NOx SIP Call large non-EGU inventory includes some, but not all, FCCU-CO boilers.
- Part 60, Subpart J (40 CFR 60.101(m)) arguably defines “FCCU” to include the FCCU-CO boiler (i.e., as “regenerator equipment for controlling air pollutant emissions and for heat recovery”).
- Treatment of FCCU-CO boilers is inconsistent among States, with some States including them in the SIP NOx trading program as non-EGUs and some States excluding them from the SIP NOx trading program.

EPA’S POSITION

EPA intends to allow each State with one or more FCCU-CO boilers the option of determining whether all its large FCCU-CO boilers are covered, or all its large FCCU-CO boilers are not covered, by the SIP NOx trading program. EPA does not intend to allow States to split the category by including some, but not all, large FCCU-CO boilers in the trading program.

- EPA’s position is based on the following circumstances:
 - a. The NOx SIP Call includes industrial boilers (as large non-EGUs), but excludes FCCUs, from calculation of required highly cost-effective reductions.
 - b. The NOx SIP Call definition of “boiler” covers FCCU-CO boilers.
 - c. Technical support documents for the NOx SIP Call final rule (but not included for NOx SIP Call proposed rules) define “FCCU” as not including the FCCU-CO boiler.
 - d. The 40 CFR Part 60 definition of “FCCU,” which arguably includes FCCU-CO boilers, created confusion over whether FCCU-CO boilers were included as non-EGUs.
 - e. Treatment of FCCU-CO boilers in large non-EGU inventories and SIP NOx

trading programs is inconsistent among States.

- Because of these circumstances, EPA believes each State should have the option of deciding whether to include all large FCCU-CO boilers in, or exclude all large FCCU-CO boilers from, the SIP NOx trading program; EPA intends not to disapprove SIPs simply because they exclude all large FCCU-CO boilers in the State from the trading program.
- EPA recommends that a State may choose to revise its SIP to include or exclude all large FCCU-CO boilers in that State as follows:
 - a. To exclude an FCCU-CO boiler currently in, and allocated allowances under, the SIP NOx trading program,¹
 - 1. Take back (or do not take action to provide) all allowances allocated to such boiler and remove such allowances from the trading program.
 - 2. When the allowance allocations for non-EGUs are updated,
 - i. Determine the controlled emissions calculated for such boiler by examining the 2007 control case portion (which reflects 60% reduction of 2007 uncontrolled emissions) of the NOx SIP Call emissions inventory.
 - ii. Decrease the total tons, and thus the total amount of allowances, for non-EGUs in the NOx trading program by the amount from step a.2.i above.
 - b. To include an FCCU-CO boiler currently not in, and not allocated allowances under, the SIP NOx trading program,
 - 1. Allocate to such boiler an amount of allowances calculated using the same procedures that were used to allocate allowances to the other non-EGUs.
 - 2. When the allowance allocations for non-EGUs are updated,
 - i. Calculate the NOx emissions remaining at the boiler after the NOx SIP Call reduction (a 60% reduction of 2007 uncontrolled emissions) by using the 2007 base case emissions inventory).
 - ii. Increase the total tons, and thus, the total amount of allowances, in the NOx trading program tons by the amount from step b.2.i above.
- For questions, contact Dwight Alpern (202-564-9151) or Doug Grano (919-541-3292).

¹ If an FCCU-CO boiler is currently in the SIP NOx trading program but is not allocated allowances because the unit is not in the 2007 control case in the NOx SIP Call emissions inventory, the unit may be excluded from the program by continuing not to allocate allowances and, when allowance allocations are updated, continuing to exclude the unit's emissions from the 2007 control case.